U.S. DEPARTMENT OF ENERGY

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DOE RELEASES INDEPENDENT REVIEW OF LOW-ACTIVITY WASTE TREATMENT SYSTEM PLANNING

Richland, Washington -- The U.S. Department of Energy (DOE) today released an independent technical review of system planning for the treatment of low-activity tank waste at the Hanford Site in Richland, Washington which recommends actions and priorities for ensuring the timely treatment of all of Hanford's low-activity tank waste.

The review recommends that DOE focus on three high-priority items to address LAW supplemental treatment. These priorities are: completion of the Waste Treatment and Immobilization Plant (WTP) by 2019, while ensuring a timely tank waste feed delivery; developing and implementing a sodium management strategy; and improving integrated system modeling capability.

"We are continuing to develop tank waste retrieval infrastructure and technologies necessary to feed vit plant operation, while also advancing vit plant technology testing and construction to support operations in 2019," said DOE's Office of River Protection (ORP) Manager Shirley Olinger. "This continued focus allows us to resolve uncertainties, positioning us to successfully determine the best LAW supplemental treatment alternative at the appropriate time to support waste treatment needs."

ORP is responsible for retrieving, treating and disposing of Hanford's 53 million gallons of radioactive and chemical waste, currently stored in 170 underground tanks. The waste is a byproduct of World War II and Cold War-era weapons production. The WTP waste vitrification plant under construction at the Hanford Site will immobilize the waste in sturdy glass using a proven technology. In this process, waste will first be separated into high-level and low-activity waste streams.

The vitrification plant now under construction originally was planned as the first of two plants. In 2003, the plant's design was altered to treat all of Hanford's high-level radioactive waste while continuing to treat approximately half of its low-activity radioactive waste, with the remaining treated by a less expensive supplemental method, such as bulk vitrification.

ORP is working with contractors to identify potential supplemental treatment technologies. Final disposition of a supplemental treatment technology, however, is partially dependent on uncertainties, such as the amount of sodium required to keep the aluminum portion of the waste solvent. Higher levels of sodium could impact efficiency of the vit plant melters.

The *External Technical Review of System Planning for Low-Activity Waste Treatment at Hanford* focused on three primary areas: alternative supplemental treatment of LAW from retrieval to final disposition; preliminary qualitative evaluation of the issues and benefits associated with the potential installation higher capacity melters at the vit plant; and construction of an additional LAW facility.

The review concluded there is adequate time to resolve uncertainties prior to making a decision on how to proceed with providing supplemental LAW treatment capacity. The timing of that decision is expected to between 2015 and 2017.

"We remain focused on treating all of Hanford's tank waste," said Ines Triay, DOE Acting Assistant Secretary for the Office of Environmental Management. "With operations of the vit plant scheduled to begin in 2019, we have time to resolve outstanding uncertainties necessary to identifying the best supplemental treatment alternative for the mission."

The *External Technical Review of System Planning for Low-Activity Waste Treatment at Hanford* and transmittal letter can be accessed at http://www.hanford.gov/orp/?page=60&parent=14.

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